

statements delivered, and report the same to the next court."

"That the owners of sewers built within thirty-five years prior to the 2nd of July, 1847, who shall make application under the new Act for parties to be compelled to lay drains into such sewers, be required to present a plan of the entire length of the sewer or sewers so built by them, shewing the several houses and premises fronting thereon: with a statement of the sums contributed by this commission, or other bodies or parties, in aid thereof, and the sums already paid for each house from which a drain has been laid; and also shewing the length of frontage, and the amount demanded for laying a drain from each of those houses from which they desire that a drain should now be laid into the sewers so built by them."

"That when the court shall have considered the report of the surveyor, and have apportioned the sums to be paid for draining into the sewers, the following form shall be forthwith issued by the court:—Sir,—By virtue of the provisions of an Act of Parliament made and passed in the session of Parliament held in the 10th and 11th years of the reign of her present Majesty Queen Victoria, intituled an Act to explain and amend the Laws of Sewers relating to the City and Liberty of Westminster and part of Middlesex, notice is hereby given to you, by the Commissioners of Sewers for the City and Liberty of Westminster, &c, that you have not drained your house and premises, situate No. — in — by any covered drain leading from such house and premises into the sewer which is in front of such house; and take notice that you are compellable by law not only to construct a covered drain to lead into such sewer, but also to pay such sum of money as the said Commissioners of Sewers shall deem just towards the original construction of such sewer. And further take notice, that you are required to drain your said house and premises in manner aforesaid, and to make contribution towards the building of the said sewer, and that you are also required to attend at the office of the commissioners, situate No. 1, Greek-street, Soho-square, any day (Sunday excepted), when particular information will be given to you as to the mode of obtaining leave of the said commissioners for making such covered drain, and as to the regulations to be observed in constructing the same. Such work to be done within twenty-one days from the date hereof."

The resolutions were adopted.

Correspondence.

REMOVAL OF THE QUADRANT ARCADE.

SIR,—The announcement in your last number relative to the proposal by the Commissioners of Woods to remove the Quadrant Arcade, cannot be allowed to pass unnoticed. The object they can have in doing so it is difficult to conceive; for as an architectural feature it is equally pleasing and unique, and forms a most graceful termination to the street; besides which, it is one of the few places in London where there is a footway sheltered from the weather. If the objection to it is the description of loungers for whom it forms an attraction, that is easily prevented, as it has lately been by the police, or by the erection of such a number of additional arcades in the newly-forming streets, that one should not be more attractive than another; or if the deficiency of light to the shops is unsatisfactory to the inhabitants, the roof may easily be made almost entirely of glass. While Paris rejoices in its Palais Royale and galleries, Venice in its Piazzas, and Berne and other cities in their arcades, the convenience and beauty of which are so strikingly felt by all who visit them, why should a feature possessing originality as well as beauty and propriety, be swept away to gratify some foolish prejudice?

The want of new buildings to ornament our metropolis, and render it worthy of its place among the capitals of Europe, is to be lamented; but the destruction or injury of an existing monument is to be doubly reprobated. And we have reason to fear that the same taste which allows the pictures of the National Gallery to be scrubbed, and permits the Wellington Statue to remain, while it removes the Quadrant, and still more deforms the ugly palace of Piccadilly by an incongruous addition, will find further scope for ingenious spoliation among existing works of art, as well as let slip opportunities for the embellishment of this city in addition to the many that have been already lost.

It is only right to say, that this step has been forced on the commissioners by the inhabitants of the houses.

GIRDER BRIDGES.

SIR,—As the girder bridge is often a subject of remark in *THE BUILDER* and other journals, allow me, through your pages, to suggest the substitution of the principle of the balance in lieu of that of the unbalanced beam (the present girder). I am not singular in the opinion, that by adopting it in this branch of mechanics it may lead to great results; but whether it did or not, while circumstances prove—and every one knows—that there is something wrong in the present system—the safety of the public demands that every means should be tried for finding out that error. The principle of the balance is certainly the greatest mechanical power known, and that of the girder the weakest. Now, if the former can be substituted for the latter, it would be a great point gained; or at all events, my suggestion may lead to some improvement in bridges. I find the difference of power in the two principles to be, namely, in a girder 18 feet long, 1 foot deep, weighing 10 cwt., and only equal to bear a load of 10 cwt.—that on the principle of the balance, of the same length and weight, it will sustain 7 tons 10 cwt., or a fifteen times greater load than the girder. The truss of these bridges, also, might be on the principle of the balance, and that would increase their power to the same extent as the girder; then, in combination, they would enable the bridge, upon the most economical and powerful principle known, to sustain to the outside power of the material, be what it may, every kind of transit-load in safety.

I am, Sir, &c.

A LOVER OF MECHANICS.

Nov. 16th, 1847.

Miscellaneous.

NOVEL APPLICATION OF ELECTRICITY.—

The *Pittsburgh Journal* has examined an invention made by Mr. Lilly of that city, in connection with Dr. Colton, which seems to challenge attention, not only for the ingenuity which it displays, but the useful results which it promises. The machine is a small locomotive, and is placed upon a circular railroad, around which it is driven by electricity. The power is applied, not to the locomotive, but to the track, and herein consists the novelty of the invention or discovery. Two currents of electricity, negative and positive, are applied to the rails, and from thence communicate with the engine. The latter is provided with two magnets, which, by a process of alternate attraction and repulsion, drive the car over the track. A piece of lead was placed on the locomotive, making in all a weight of about ten pounds, and on the application of the battery, the machine moved with astonishing rapidity up a plane inclined about five degrees. Heretofore the propelling power has been used on the car itself—in this instance, however, the power is placed in the rails, and an engineer might remain in one town, and with his battery send a locomotive and train to any distance required.—*New York Literary World*.

EFFECT OF BRITISH SHEET GLASS IN VENERIES.—Having used British sheet glass for glazing two vineries, says the Bishop of Rochester's gardener, Mr. J. C. Dwerrihouse, I beg to add my testimony to its scorching effect upon plants, and likewise to recommend a simple plan of preventing it. As burning in general may be traced to blisters, it is common to touch them with white paint. Now, in British sheet glass there are numerous spots and wavy lines, similar to those produced by a common burning lens, even though invisible when examined from the inside of the houses, but, I find, easily detected and remedied by taking off the lights, and leading them, one at a time, against any smoothly-painted surface (having a southern aspect) during bright sunshine. A little thin white paint and a camel's hair brush will dim them sufficiently to prevent, I think, further mischief. Where it is impracticable to remove the lights, a thin light screen or board might be used, and moved along by a person inside; whilst another, with a paint-brush, on the roof, could perform the necessary operation. No person will be much pleased with the appearance of the glass afterwards; but it is much more agreeable to me than that of burnt leaves.

LET IN THE LIGHT.—In an article on country cottages, *Bell's Messenger* observes truly, that "in considering the size of the windows of even our own rooms, the beneficial influence of light is far too rarely regarded. That such good effect, however, is constantly and materially exerted, is undoubted. It is an error to suppose that the action of light even upon the general health of man is immaterial; the natives of the deep dark forests of North America attest this by their unhealthy hue, as much as the blanched plants of the gardener. That the very nature of the gases evolved by plants is altered by the absence of light is known to almost every one; that small animals are often perceptibly affected by its absence is equally well ascertained. The experiments of Dr. Edwards on this subject are remarkable. He has shewn, for instance, that if tadpoles are nourished with proper food, and exposed to the constantly renewed contact of water (so that their beneficial respiration may be maintained) but are entirely deprived of light, their growth continues, but their metamorphosis into the condition of air-breathing animals is arrested, and they remain in the form of large tadpoles. Dr. Edwards has also noted that persons who live in caves and cellars, or in very dark and narrow streets, are apt to produce deformed children; and that men who work in mines are liable to disease and deformity beyond what the simple closeness of the air would be likely to produce. Do the constructors of the labourers' cottages in general sufficiently regard these things? Do they remember how great an influence the absence of light and of ventilation produces upon the health of their tenants? We dwell the more readily upon this too little heeded object in the construction of labourers' cottages, since it is naturally one of the most neglected and least understood advantages in a dwelling-house. It is too probable that the owner in general pays but little regard to these things, since he neglects even others of a still more important kind; and this arises most commonly, not from any unwillingness to serve his poor tenants, but from a want of consideration. Let the owners of such ill-constructed dwellings remember also, that when their inmates thus suffer in their health, they also from that cause suffer very considerable inroads upon their only capital, their labour. And again, other evils follow: their crowded home is rendered comfortless and distasteful, and the laws of decency and morality are alike outraged.

THE DIOCESEAN CHURCH BUILDING SOCIETIES at Ripon and at Bath have recently held their usual meetings, and have reported various grants, of which the following are the principal. The Bath Association have granted £6400 during the year towards the enlargement or building of various churches, including St. James's at Bath, Row Barton at Taunton, Wellington, Penselwood, Hinton St. George, Kingsbury Episcopal, and Stanton Drew, providing in all for the accommodation of 1,554 persons; sittings mostly altogether free. The total amount of accommodation, in the providing of which the association has been instrumental, now numbers 21,432 additional sittings, of which 16,435 are unappropriated, and the total amount of grants is £2521. The association at Ripon have granted 4,137 during the same period towards the erection of seven new churches, the enlargement of three, and the erection of eight parsonage houses, besides the endowment of two churches. They have in all provided church accommodation for 3,107 persons; sittings mostly altogether free. During the last eight years this society has expended 42,527l. odd, out of 200,000l. expended within the diocese, on the building of 54 new churches, the enlargement of 20, and the rebuilding of 12. Thus 32,665 additional sittings have been obtained, of which 25,404 are free, or let at a trifle; 41 churches have been endowed, and 51 parsonage houses erected or purchased.

LINCOLN MECHANICS' INSTITUTION.—Sir C. Anderson, Bart., of Lea, delivered a lecture on the architecture of the early ages, at the Mechanics' Institute in Lincoln, on Tuesday evening in last week: his object being (as the baronet said) to kindle amongst the mechanics and labouring classes a taste for the beautiful in art, convinced as he was that those classes could appreciate the beautiful, and that the cultivation of good taste would lead to beneficial results.